PECULIARITIES IN THE CLINICAL COURSE OF HODGKIN'S AND NON-HODGKIN'S LYMPHOMA IN CHILDREN

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For several decades past the structure of children's morbidity and mortality changed considerably. At a WHO workshop on pediatric oncology held in Prague in 1977 the experts emphasized that malignant neoplasms came first in mortality structure of children and adolescents in economically developed countries. Among them haemoblastoses (systemic and solid ones) have the highest incidence rate — about 64,8 per cent (3). According to the data of Pediatric oncology register in Manchester malignant lymphomas represent about 6 per cent of all malignant tumours in childhood. This rate is about 15 per cent in Canada, about 10 per cent in the USA, and about 12,7 per cent in the SU (1). In Bulgaria Hodgkin's lymphomas are 8,5 per cent and non-Hodgkin ones 7,9 per cent of children's neoplasms (1). On the other hand, multiform clinical manifestation of children's malignant lymphoma causes not rarely diagnostic mistakes in everyday pediatric practice. It strikes that most patients are hospitalized too late, often in IIIrd and even IVth clinical stage.

The purpose of the present work is to study the peculiarities in the clinical course and the therapeutic effects on children's malignant lymphoma.

Material and methods

During a 5-year period (1978—1983) a total of 20 children with malignant lymphoma hospitalized in the Second Pediatric Clinic of the Higher Institute of Medicine in Varna were followed-up in the Clinic and ambulatory in the Pediatric oncohaematologic consulting room. During the same period a total of 37 children with malignant neoplasms and 52 ones with an acute leukemia were hospitalized in the Clinic. Our study is based on the anamnesis, objective state, blood biochemical investigations, cytomorphology of peripheral blood and bone marrow, X-ray study, biopsy results as well as on echographic, lymphographic and scintigraphic examinations.

Results and discussion

Fig. 1 shows the relative part of malignant lymphoma in the structure of hospitalized oncohaematologic children's morbidity. It can be seen that during this period malignant lymphomas represent 54 per cent of children's solid tumours but occur almost 3 times more seldom than the acute leukemia (ratio 2,6:1). Children's distribution according to sex and age is demonstrated on table 1 where one can see that males are more frequently affected than females (ratio 9:1). In the age group between 6 and 12 years the highest incidence rate is observed.

According to the histologic picture of the lymphoma the patients are distributed as follows: with Hodgkin's lymphoma — 12 (10 boys and 2 girls aged from 4 years and 6 months up to 15 years) and with non-Hodgkin's one — 8 boys aged from 2 years and 10 months up to 9 years. In Hodgkin's lymphoma cases the primary localization of the process is in cervical lymph nodes (7 patients, 5 with right and 2 with left side localization), in mediastinal ones (2 patients) and in abdominal ones — paraaortic and ad portam hepatis (3 children). According to the anamnesis the patients with primary cervical lymphogranuloma localization complain of slight weakness and paleness as well as of a negligible disturbance of the general state. Cervical lymph node enlargement is perceived by the parents in 4 cases and by the children themselves in 3 ones (fig. 2). There is physician's examination and treatment of nonspecific lymphaneditis in any cases. 3 cases were, however, treated 9—10 months long with the diagnosis "tbc lymphadenitis". The patients were hospitalized in the Clinic between 6th and 14th month after the initial symptoms. The onset of the illness is manifested with loss of appetite, high temperature, dry irritating cough, faintness and weight loss in patients with primary mediastinal localization. After lung roentgenography the patients are

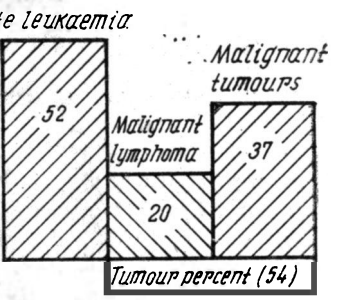

Fig. 1

Table 1

Distribution of children with malignant lymphoma according to sex and age

Sex \ Age	0—3 years	3—6 years	6—9 years	9—12 years	12—15 years	Total
Boys	1	3	5	6	3	18
Girls	—	—	1	—	1	2
Total	1	3	6	6	4	20

admitted to hospital comparatively early (2—3 months after initial symptoms only).

Recurrent abdominal pain, septic temperature, rapid weight loss and jaundice dominates in the clinical picture of patients with primary abdominal localization (2 children). The diagnosis is ensured after laparotomy performed 3—4 months after the clinical manifestation of the illness in all 3 children of this group.

Blood tests show as follows: an accelerated RSE over 20/45 mm in 5 children and over 100 in 7 ones; hemoglobin between 120 and 110 g/l in 4 ones, between 110 and 90 g/l in 5 and under 90 g/l in 3; leukocytes are over 15.10^9 with an expressed lymphopenia in the differential blood picture in 7 children, they are in normal ranges with a moderate eosinophilia in 2 ones, and there is a leukopenia with eosinophilia in 3 ones. Histopathologically, mixed cellular variant predominates in 8 patients, and lymphocytes — in 2 ones. On the basis of complex clinical,

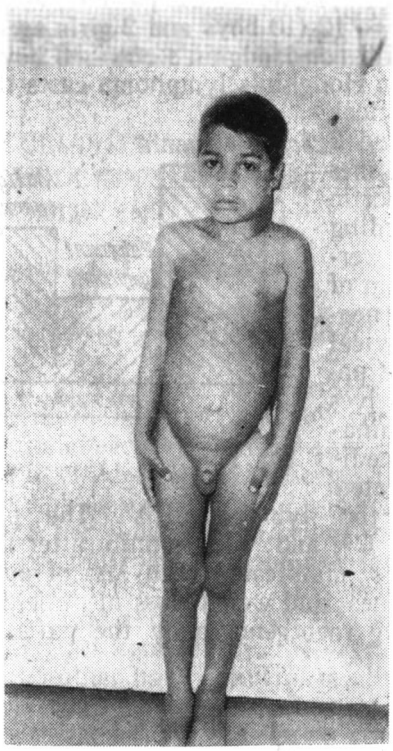

Fig. 2

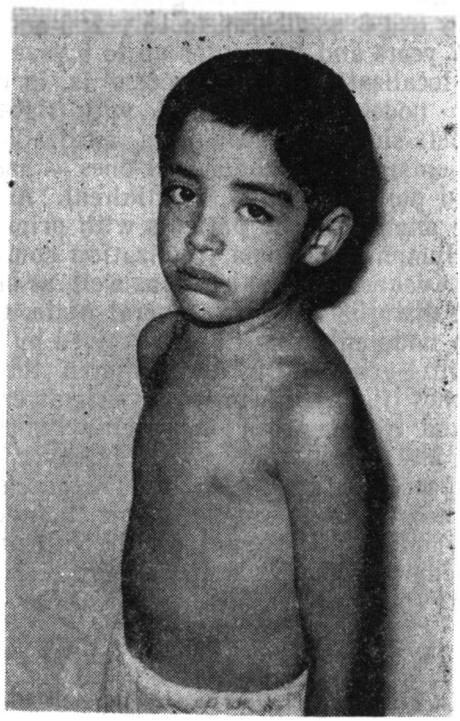

Fig. 3

X-ray and paraclinical examination the following stages of the diseases are determined at initial hospitalization: Ist B-clinical stage (2 patients); IInd B-stage (8 ones); IIIrd B-stage (2 ones). The treatment is complex and appropriate to the clinical stage. There is a lethal outcome in 2 children during IIIrd B-clinical stage with primary abdominal localization of Hodgkin's lymphoma before the end of the first year after diagnosing and in the fifth year after diagnosing in another one child. Rest patients are in clinical and biological remission more than 3 years long.

Concerning non-Hodgkin's lymphoma primary mediastinal localization predominates (5 of a total of 8 boys). Respiratory tract symptoms dominate in the clinical picture. 4 of the patients were treated in pediatric departments with the diagnosis of pneumonia with pleurisy. The correction of the diagnosis is made 1—1,5 month after the beginning of the treatment (fig. 3). Primary lymphoma

localization was in the right cervical lymph nodes with rapid infiltration of the corresponding tonsil resulted in a severe pharyngeal obstruction in one patient On the occasion of an acute appendicular pain a laparotomy is performed and a neoplasm is established with terminal ileum localization and histological characteristics of lymphosarcoma in other 2 children. At the time of hospitalization the patients are distributed according to the clinical stage as follows: Ist B — 2 children; IInd B — 3 ones, and IIIrd B — 3 ones, too. In the course of complex and appropriate treatment a leukemization of the process occurs in 2 patients. Two children with primary mediastinal localization of the lymphoma died before the end of the first year. The rest of the children are in clinical and biological remission for a period from 1 till 3 years.

Even though covering a small number of patients, our study confirms the observations of other authors (1—4) with regard to the predominance of malignant lymphomas in the structure of children's oncologic morbidity. Boys in the age group between 6 and 12 years are mainly affected. According to N. S. Kislyak (3) it could be due to the higher potention of male sex to physical development as well as to certain peculiarities of lymph tissue in boys which determines the later terms of its differentiation. Recently, the direct relation of the extent of lymphocyte proliferation with some kinds of somatomedins under regulation of a number of inhibitors was proven. Therefore, children represent a peculiar risk group concerning the morbidity of an acute leukemia and lymphoma. It is established that in 8 of a total of 10 children suffering from haemoblastosis an acute lymphoblastic leukemia or a malignant lymphoma develops what means that every second child with neoplastic disease suffers of a tumour with malignant lymphoid cells as substrate. This fact is of great practical importance because of the late hospitalization of children with malignant lymphomas.

We can conclude that malignant lymphoma in childhood takes the second place after leukemia in the structure of children's oncohaematology affecting predominantly the male sex in the age group between 6 and 12 years. The improvement of early diagnosis of lymphoma requires to pay attention as district pediatrist to the patients with unilaterally enlarged peripheral lymph nodes with a view to their timely hospitalization in corresponding oncohaematologic children's hospital departments.

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ОСОБЕННОСТИ КЛИНИЧЕСКОГО ПРОТЕКАНИЯ ХОЧКИНОВЫХ И НЕХОЧКИНОВЫХ ЛИМФОМ У ДЕТЕЙ

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РЕЗЮМЕ

Исследование охватывает 20 детей со злокачественными лимфомами, диагностицированных и лечившихся в детской клинике при Высшем медицинском институте в Варне. 12 из них (10 мальчиков и 12 девочки) были больны лимфомами Хочкина и 8 детей (мальчики в возрасте от 2 лет и 10 месяцев до 9 лет) болели нехочкиновыми лимфомами.

У детей с хочкиновыми лимфомами первоначальная локализация процесса была обнаружена в шейных лимфатических узлах — у 7 больных, в средостении — у 2 и в парааортальных лимфатических узлах живота — у 3, где диагноз был установлен в результате лапаратомии. Наиболее благоприятным оказалось протекание болезни в случаях первичной абдоминальной локализации.

У больных с нехочкиновыми лимфомами наиболее частой первичной локализацией оказалась локализация в медиастинальных лимфатических узлах — у 5 детей, следующая по частоте локализация была установлена в кишках — у 2 детей и в шейных лимфатических узлах — тоже у 2 детей. Во время лучевой терапии и химиотерапии лейкемизация процесса наблюдалась у двух детей.

В связи с тем, что злокачественные лимфомы занимают ведущее место в структуре детской онкологической заболеваемости, необходимо привлечь внимание участковых педиатров к клиническим проявлениям этих бластом с целью своевременной госпитализации больных.